Appendix C
Cost Estimates

C.0 Sidewalk Cost Considerations[1]

The actual cost of providing sidewalks is different for each region of the country and varies with the season. Actual bid prices are also influenced by how busy contractors are at the time of construction. The cost of constructing sidewalks alone is about $8-$9 per square foot including such things as curb ramps and crosswalk features.

Factors to consider when calculating the cost of sidewalks

1. *Presence of curb and gutter*

The costs of providing curb and gutter, which presumes the need to also provide a street drainage system, run much higher than the cost of sidewalk alone.

2. *Number of driveways*

To comply with ADA, many existing driveways must be replaced with ones that provide a level passage at least 0.9 (3 ft) wide. It can also be advantageous to inventory all existing driveways to see if any can be closed, resulting in a cost-savings.

3. *Number of intersections*

While intersections represent a reduction in the sidewalk, curb ramps are required where sidewalks cross intersections and the cost of providing additional traffic control at each intersection should be considered.

4. *Obstacles to be removed*

The cost for moving or removing obstacles such as utility poles, signposts, and fire hydrants vary too much to be itemized here; however, they are required to be moved if they obstruct access. These costs must be calculated individually for each project.

5. *Structures*

While minor sidewalk projects rarely involve new structures such as a bridge, many projects with significant cuts and fills may require retaining walls and/or culvert extensions. The costs of retaining walls must be calculated individually for each project.

6. Right-of-way

While most sidewalk projects can be built within existing rights-of-way (especially infill projects), some may require some right-of-way easement. An alternative to acquiring right-of-way is to narrow the roadway, which should consider the needs of bicyclists (e.g., through bike lanes or shoulders, at a minimum of 1.5 m (5 ft).

7. Miscellaneous factors

Planters, irrigation, benches, decorative lampposts, and other aesthetic improvements cost money, but they are usually well worth it if the impetus for the project is to create a more pleasant and inviting walking environment.

When project costs appear to be escalating due to one or more of the above-listed items, especially retaining walls or acquiring right-of-way, consideration may be given to narrowing the sidewalk in constrained areas as a last resort. The full sidewalk width should be resumed in non-constrained areas—this is preferable to providing a narrow sidewalk throughout, or dropping the project because of one difficult section.

Tips to Reduce Total Costs

1. Stand-alone vs. integrated within another project

Sidewalks should always be included in road construction projects. Stand-alone sidewalk projects cost more than the same work performed as part of a larger project. Sidewalks can be piggybacked to projects such as surface preservation, water or sewer lines, or placing utilities underground. Besides the monetary savings, the political fallout is reduced, since the public doesn't perceive an agency as being inefficient (it is very noticeable if an agency works on a road, then comes back to do more work later). The reduced impacts on traffic are a bonus to integration.

2. Combining Projects

A cost-savings can be achieved by combining several small sidewalk projects into one big one. This can occur even if the sidewalks are under different jurisdictions, or even in different localities, if they are close to each other. The basic principle is that bid prices drop as quantities increase.

C.1 Cost Estimates

The following table uses an estimate of $3/square foot to provide an estimate per each pedestrian corridor. $3/square foot was chosen to be conservative and is towards the high end of typical costs per square foot. Some pedestrian corridors have sections of existing sidewalk so these sections were subtracted from the overall construction length. Holly Springs currently only issues incentives to construct sidewalks on both sides of thoroughfares, collectors, and commercial streets. However it is recommended in this Plan to require sidewalks on both sides of all thoroughfares, collector, sub-collector, and local streets (except for short cul-de-sacs, dead-end streets and roadways in areas of rural development. Otherwise, residential streets only require one side. This was taken into consideration when developing these cost estimates.

Estimated costs were also calculated for the top priority greenway projects in the Holly Springs area and can be found in Table C.2. The number of $350,000 per mile of trail assumes a 10-foot wide asphalt surface, with signage, trailheads, and minor bridges. This cost is significantly reduced for natural surface types which will be options for these facilities. These estimates are based on a number of local studies and local research.

As mentioned above, other factors can increase actual costs. These estimates are simply to serve as a rough guide for the Town of Holly Springs.

Footnotes:

[1] "Recommended Guidelines/Priorities for Sidewalks and Walkways." http://www.walkinginfo.org/pedsafe/moreinfo_sidewalks.cfm#cost. US Department of Transportation, Federal Highway Administration.

The material in section C.1, along with the sidewalk cost estimates per square foot, were taken directly from "Recommended Guidelines/ Priorities for Sidewalks and Walkways," from PEDSAFE online resource, a project sponsored by the USDOT Federal Highway Administration.

Table C.1

On-Road Cost Estimate

Primary Pedestrian Corridors	From	To	Phase	Length of Segment (ft)	Existing Sidewalk (ft)	Cost per Sq. Foot*	Min. Width (ft)	Estimated Cost**
Avent Ferry Road	Cass Holt	NC 55 BYP	Short-Term	5572	0	$9	5	$501,480
Avent Ferry Road	Longbottom	Cass Holt	Short-Term	6065	0	$9	5	$545,850
Avent Ferry Road	NC 55 BYP	Center	Short-Term	3761	500	$9	5	$315,990
Ballentine	Raleigh	Bottleneck	Medium-Term	2567	2627	$9	5	$112,815
Ballentine	Bottleneck	Irving	Medium-Term	3437	1230	$9	5	$253,980
Bass Lake Road	Holly Springs	Olde Mills Bluff	Short-Term	9082	835	$9	5	$779,805
Bass Lake Road	Olde Mills Bluff	Sunset Lake	Medium-Term	8921	0	$9	5	$802,890
Briarglen	Bass Lake	Mistyridge	Long-Term	2275	0	$9	5	$204,750
Broad	Old Adams	End/Future Ext.	Long-Term	1705	0	$9	5	$153,450
Burt	Earp	New Hill	Long-Term	629	0	$9	5	$56,610
Cass Holt	Rouse	Avent Ferry Road	Medium-Term	11080	0	$9	5	$997,200
Earp	Raleigh	Bass Lake	Short-Term	2705	2705	$9	5	$121,725
Earp	Burt	Raleigh	Medium-Term	2179	554	$9	5	$171,180
Elm	Ballentine	Grigsby	Medium-Term	3250	0	$9	5	$292,500
Grigsby	Raleigh	Fair Ground	Medium-Term	4302	2309	$9	5	$283,275
Grigsby	Fair Ground	End/Future Ext.	Long-Term	3121	1705	$9	5	$204,165
Holly Springs Road	Main Street	Bass Lake	Short-Term	3058	2410	$9	5	$166,770
Holly Springs Road	Bass Lake	Linksland	Short-Term	4285	3467	$9	5	$229,635
Holly Springs Road	NC 55 BYP	Main Street	Short-Term	4442	545	$9	5	$375,255
Holly Springs Road	Linksland	Sunset Lake	Medium-Term	5076	654	$9	5	$427,410
Holly Springs Road	Sunset Lake	Holly Run	Long-Term	5375	970	$9	5	$440,100
Honeycut	Cass Holt	Piney Grove Wilbon	Long-Term	4557	0	$9	5	$410,130
Irving	Ballentine	New Hill	Long-Term	2380	0	$9	5	$214,200
Main Street	Springstone	Holly Springs	Short-Term	3117	1844	$9	5	$197,550
Main Street	Holly Springs	Elm	Short-Term	3087	1860	$9	5	$194,130
Main Street	Arbor Creek	Springstone	Medium-Term	4270	1188	$9	5	$330,840
Main Street	Elm	NC 55 BYP	Medium-Term	2589	0	$9	5	$233,010
Main Street	NC 55 BYP	Arbor Creek	Long-Term	7394	2636	$9	5	$546,840
Main Street	Ralph Stevens	Old Adams	Long-Term	2899	0	$9	5	$260,910
NC 55	Avent Ferry Road	Ralph Stevens	Long-Term	2250	0	$9	5	$202,500
New Hill Road	Old Apex Road	Town Boundary	Long-Term	6457	0	$9	5	$581,130
New Hill Road	NC 55 BYP	Old Apex Road	Long-Term	1867	0	$9	5	$168,030
Old Adams	Main Street	End/Future Ext.	Long-Term	2394	0	$9	5	$215,460
Old Holly Springs/Apex	New Hill Road	Woodscreek	Long-Term	8474	0	$9	5	$762,660
Old Smithfield	NC 55 BYP	Main Street	Long-Term	2240	0	$9	5	$201,600
Optimist Farm	Sunset Lake	Roseberry	Long-Term	3626	0	$9	5	$326,340
Optimist Farm	Roseberry	Lamm	Long-Term	2830	0	$9	5	$254,700
Piney Grove Wilbon	Honeycut	Avent Ferry Road	Medium-Term	7337	0	$9	5	$660,330
Raleigh Road	Main Street	Holly Springs	Short-Term	2371	1261	$9	5	$156,645
Ralph Stephens	Teal Lake	Main Street	Long-Term	5220	0	$9	5	$469,800
Stephenson	Sunset Lake	Rhythm	Long-Term	5746	0	$9	5	$517,140
Stinson	Bass Lake	End	Long-Term	970	1632	$9	5	$13,860
Stinson	Grigsby	End	Long-Term	3282	3058	$9	5	$157,770
Sunset Lake	Main Street	Stephenson	Long-Term	7903	0	$9	5	$711,270
Sunset Lake	Stephenson	Holly Springs	Long-Term	5543	4598	$9	5	$291,960
Sunset Lake	Holly Springs	Brackenridge	Long-Term	9268	3424	$9	5	$680,040
Sunset Lake	Brackenridge	Bass Lake	Long-Term	6629	0	$9	5	$596,610
Woodscreek	Woodfield	Old Apex Road	Long-Term	4988	0	$9	5	$448,920
							Total:	**$17,241,210**

**Costs are only for construction, doesn't include ROW or utility easement relocation*

***Calculated by the following (Segment Length x 2) - (Existing Sidewalk in Segment) x (Cost Per Sq. Foot) x (Minimum Width);*

Table C.2

Greenway Cost Estimate

Greenway Corridor	From	To	Length of Segment (ft)	Cost per Mile	Min. Width (ft)	Estimated Cost*
Bass Lake Loop Greenway Completion	End of Existing Trail	Park Facilities	3280	$350,000	10	$217,424
Central Spine Greenway	Middle Creek	Earp Road	8635	$350,000	10	$572,396
Holly Springs Road	Village District Area	NC 55 Bypass/Existing Gwy	4320	$350,000	10	$286,364
Middle Creek Greenway	Sunset Lake	Main Street	17560	$350,000	10	$1,164,015
North Main Street Rail-Trail	Anchor Creek Way	NC 55 Bypass	9150	$350,000	10	$606,534
Utley Creek Greenway	Holly Glen	NC 55 Bypass	9550	$350,000	10	$633,049
Utley Creek Greenway Spur	Utley Creek Greenway	Holly Springs Business Park	7050	$350,000	10	$467,330
VDAP to Bass Greenway	Village District Area	Bass Lake Park	10150	$350,000	10	$672,822
Village District Area Greenways	Downtown	Neighborhoods	11111	$350,000	10	$736,525
Womble Park Greenway Connectors	In Park	Neighborhoods	5480	$350,000	10	$363,258
Womble-Bass Greenway	Womble Park	Bass Lake Park	4600	$350,000	10	$304,924
					Total:	**$6,024,640**

**Calculated by the following (Segment Length/5280) x (Cost Per Mile)*